

yellowish hairs; in the centre of all the segments, except the first, sixth, and seventh, the hairs are thicker and whiter, extending halfway up the width of the segment; on the sides the pubescence is mostly yellow on the first, yellow and black on the second, third, and fourth, yellow on the fifth and sixth, and black on the seventh; underside yellow, with irregular black markings and whitish pubescence. Legs reddish yellow, the coxæ with long white hairs, long black hairs on the underside of the femora, and short black pubescence elsewhere. Wings hyaline, grey, with brown veins; no appendix; the incomplete vein is distant about a third of its actual length from the border, the first posterior cell closed rather near the border.

Length 11 millim.

The female type is similar; the forehead is reddish brown, with darker frontal stripe and black pubescence; the second joint of the palpi is as long as the first, curved, tapering to a point, and yellower in colour; the yellow fringes on the abdomen do not extend beyond the fifth segment.

LXVII.—*The Lycaon and Pedetes of British East Africa, and a new Gerbille from N. Nyasa.* By OLDFIELD THOMAS.

I.—LYCAON.

THE British Museum received many years ago from Capt. (now Gen. Sir Frederick) Lugard examples of the East-African *Lycaon*, and later on from Mr. F. J. Jackson an imperfect skin of the same form; but it is only now that, thanks to further material from other regions and to the receipt from Mr. C. S. Betton of three perfect skins from East Africa, that I am able to venture on a determination of this animal.

Owing to their peculiar irregular coloration specimens of *Lycaon* are particularly difficult to compare effectively with one another, and still more to describe in a recognizable manner. As is well known, no two individuals, even if from the same pack, are precisely identical, and it is only by the general average coloration that one is able to distinguish the local races at all.

However, it appears that while (1) the Cape form (*L. pictus venaticus*, Burch.) is more yellow than black, with yellow-mixed backs to the ears, with a good deal of yellow on the

belly, and a certain admixture of whitish hairs in the throat-ruff, and in (2) the typical *L. pictus* from Mozambique, as represented by a series of specimens from Nyasa, the two colours are of nearly equal extent above and below, but little white being present, and the back of the ears and the throat-ruff are black, (3) the form found in East Africa is so much darker throughout, with an extreme reduction of the yellow, that it deserves subspecific distinction. It may be called

Lycaon pictus lupinus, subsp. n.

General colour above marbled black and yellow, with at least twice as much black as yellow; in fact, the animal would be called dark with yellow markings, while the Cape one might be described as yellow with black markings. White spots rarely present on the upper surface. Muzzle black to level of eyes; central dark line present and distinct, passing down the nape to the back, or, rarely, obsolete on the neck. Temporal region greyish yellow, not nearly such a rich yellow as in the other forms. Back of ears black. Under surface marbled black and white, without yellow, the two colours sharply defined from each other. The throat is wholly black, and in a general way there is more white on the chest and fore belly, and more black posteriorly, but in each region there are marblings of the other colour. Limbs black proximally, marbled black and white lower down, with a little inconspicuous yellow present on the tibiæ; metapodials nearly entirely white, and the digits black throughout. Tail with its usual three colours—yellow proximally, black mesially, and white terminally—all about equal in extent, or with more black than either of the other colours.

Skull not definably different from that of the other forms.

The specimens received from Gen. Lugard and Mr. Jackson are even darker than those here described, being almost wholly brown or black, with scarcely any yellow, and but little white marbling on the under surface and limbs.

Dimensions of the type (measured in skin):—

Head and body 930 millim.; tail 260; hind foot (s. u.) 183 (all approximate only).

Skull: greatest length 199; basal length 175; zygomatic breadth 125; length of nasals diagonally 59; interorbital breadth 42; breadth of brain-case 67; palate length 97; length of upper carnassial 21.

Hab. British East Africa. Type from the Nyuki River Swamp, in the Rift Valley on Equator. Altitude 2000 m.

Other specimens from the M'Kindu River, E. Athi plains; altitude 1600 m.

Type. Adult female. B.M. no. 1. 4. 26. 2. Killed 17th January, 1901, and presented by C. S. Betton, Esq.

This dark *Lycaon* might have been considered specifically separable from the other forms had it not been that intermediates occur in the Mweru region, where a specimen, now in the Museum, was obtained by Mr. Richard Crawshay.

Curiously enough, the Abyssinian hunting-dog, as represented by a specimen collected by Essler at Armalochoo, is again equally black and yellow marbled like the typical Mozambique form.

II.—PEDETES.

That *Pedetes* inhabited East Africa has been long known, but owing to the fact that the specimens sent had been young ones, no proper comparison with the South-African *P. caffer* had hitherto been possible. Now, however, Mr. C. S. Betton, to whom the Museum is indebted for so many East-African mammals, has given us a fine skull of a *Pedetes* obtained by him at Morendat, and a comparison of this with South-African examples shows that the northern form should be distinguished from the southern.

It may be called

Pedetes surdaster, sp. n.

Size, as judged by skull, rather less than in *P. caffer*, but part of this difference is due more to the smaller nasals and bullæ than to a real reduction in general size. Nasals conspicuously smaller both in length and breadth, not reaching back to the level of the hinder margin of the anteorbital fossa. Premaxillary processes on each side of nasals very narrow, barely 1 millim. broad at the broadest part, instead of about 3 millim. Top of brain-case more vaulted than usual. Interparietal broad, short antero-posteriorly, its anterior margin projected angularly forward instead of being evenly convex. Bullæ conspicuously smaller in every dimension than in *P. caffer*, the visible surface above barely two thirds that in the allied species; the distance from the most anterior upper corner to the level of the most projecting point behind is 13·3 millim., as compared with 18·5, 19, and 19·5 in three skulls of *P. caffer*, while below the antero-posterior diameter of the inflated bulla is 11·5 as compared with over 14 in *P. caffer*. Key-shaped process across bulla from back of squamosal shorter (9·7 millim.) and narrower. Anterior

palate much less deeply concave, the region of the palatine foramina much less sunk below the general palatal level. Palatine foramina shorter, their septum much narrower. Basicranial region with only one mesial vacuity, the usual opening in the basisphenoid connecting with the floor of the brain-case absent, that in the basioccipital alone present.

Incisors comparatively weak, both narrower and less deep than in *P. caffer*. Molars also rather smaller and narrower; the two laminae of each tooth more parallel with each other, less opened out externally than in *P. caffer*.

Dimensions of the typical skull:—

Greatest length 82 millim.; basilar length 63; zygomatic breadth 55.5; nasals 27×18.5 ; interorbital breadth 34; breadth across postorbital processes 42; greatest mastoid breadth 42; interparietal 8.8×14.5 ; palate length 31.7; palatal foramina 5.8×3.6 ; length of cheek-tooth series (crowns) 15.7.

Hab. Morendat, mile 365 of Uganda Railway, British East Africa. Altitude 2000 m.

Type. Skull. B.M. no. 2. 4. 5. 5. Collected and presented by C. Stuart Betton, Esq.

So far as is shown by a young specimen, *P. surdaster* does not differ externally very much from *P. caffer*, though in correlation with the smaller bullæ we may expect to find the ears rather shorter.

III.—*Tatera liodon*, sp. n.

Size of *T. valida*, Boc., but with even less distinct grooves on the upper incisors.

General colour, as usual, dark sandy, the back greyer and the sides brighter. Under surface sharply defined white, the hairs white to their bases on the chest and groins, slaty basally on the belly. Face like back, top of nose rather darker; an indistinct lightish mark above the posterior half of each eye. Ears of medium length, their backs rather darker than the head, a lightish patch at their posterior bases. Upper surface of hands and feet pure white; claws long and powerful. Tail shorter than the head and body, greyish brown above, whitish below, without terminal pencil.

Skull not unlike that of *T. valida*, which it about equals in size. Palatal foramina reaching back to the level of the front of *m*¹.

Upper incisors each with a very faint and scarcely perceptible median groove, as shallow as those of *Gerbilliscus Boehmi*.

Dimensions of the type (measured in skin):—

Head and body 177 millin.; tail 142; hind foot (wet) (s. u.) 35; ear (wet) 20.

Skull: upper length from back of interparietal 42; zygomatic breadth 22; nasals 16.5×4.3 ; interorbital breadth 6.5; interparietal 5×10.5 ; palate length from hensenion 20; diastema 11.4; length of palatine foramina 8.5; length of bulla 11; upper molar series 6.8.

Hab. Lake Mweru.

Type. Male. B.M. no. 2. 1. 6. 16. Presented by Commissioner Alfred Sharpe, C.B.

This gerbille was at first taken for a *Gerbilliscus*, but further study convinces me that, like the *T. valida* of Angola, it is a *Tutera* with the incisive grooves shallower than in the ordinary forms. From that species, of which the British Museum contains a co-type, it is distinguishable by its still less developed, indeed almost indistinguishable, incisive grooves and the slaty bases to its belly-hairs.

From *Gerbilliscus fraterculus*, which is entirely without incisive grooves, and is perhaps a similarly retrogressively specialized *Tutera*, *T. liodon* differs by its much larger size as well as by the structure of its incisors.

LXVIII.—On the Species of *Mydaus* found in Borneo and the Natuna Islands. By OLDFIELD THOMAS.

BESIDES the original *Mydaus javanensis*, Desm.* (*M. meliceps*, F. Cuv.†, auct.), of Java, from which the Sumatran form cannot be distinguished, and the Palawan *M. Marchei*, Huet (*M. Schadenbergi*, Jent.), I find that there are two definable forms of the genus, occurring respectively in Borneo and the Natuna Islands. The former is very distinct from all, while the latter, curiously enough, is most closely allied to *M. javanensis*.

Mydaus lucifer, sp. n.

Size large, the typical female skull decidedly larger than any other female *Mydaus* skull in the Museum collection.

Fur thick and coarse, uniformly directed backwards throughout; not reversed forward on the nape as in *M. javanensis*. Light marking very broad and conspicuous on the

* *Mephitis javanensis*, Desm. Mamm. i. p. 187 (1820).

† H. N. Mamm. (fol.) ii. pl. clix. (1821).